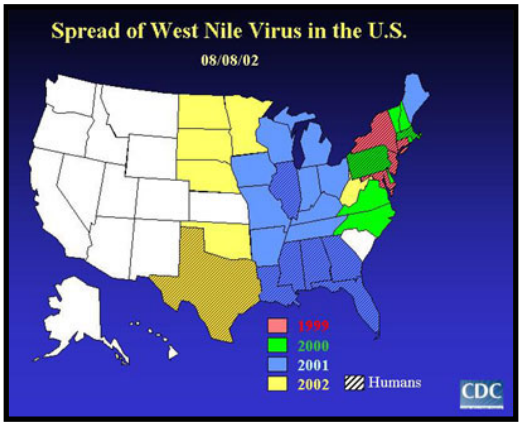
"Bug of the Month"

West Nile virus (WNV) has emerged in recent years in temperate regions of Europe and North America, presenting a threat to public, equine, and animal health. The most serious manifestation of West Nile virus is fatal encephalitis (inflammation of the brain) in humans and horses, as well as mortality in certain domestic and wild birds. One of the primary vectors of West Nile virus are mosquitoes in the genus *Culex*, such as *Culex tarsalis* pictured at the right.

WHAT ARE THE VECTORS? A number of mosquito species are involved in the transmission of West Nile virus. Most are in the genus *Culex*, such as *Culex tarsalis* pictured at the right. The history of mosquito-borne diseases in Washington dates back to the 1930s. Several outbreaks of western equine encephalitis and St. Louis encephalitis in eastern Washington between 1939 and 1942 resulted in numerous human cases and several deaths. *Culex tarsalis* was identified as the primary vector species with *Culex pipiens* and *Culiseta inornata* also implicated. These outbreaks resulted in the establishment of several mosquito control districts in 10 Washington counties. Surveillance was initiated in the state of Washington in 2000 and undertaken in the 2001. The results of the 2001 survey showed several new mosquito species identified for the first time. Potential vector species for West Nile Virus were found in four eastside counties (Spokane, Chelan, Franklin and Walla) and in four Westside counties (King, Pierce, Thurston, and Lewis). *Culex tarsalis* has bands of white scales around the joints of its tarsi (legs). There is also a pale band around the center of the proboscis (mouth parts). Egg to adult development can be achieved in as little as four to ten days. This mosquito breeds in nearly every fresh water source except tree holes. Larvae can be found in all but the most polluted ground pools. In most areas, the adult female mosquito feeds equally on birds and mammals, including man.

`WHERE IS WNV? In the U.S. from 1999 through 2 August 2002, WNV has been documented in Alabama, Arkansas, Connecticut, the District of Columbia, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Virginia, West Virginia and Wisconsin. A case of WNV has been reported in southeastern Washington earlier this month. The individual apparently picked up the virus from Louisiana before visiting Washington. The case does not indicate that the disease has spread to the state, and the infected individual does not represent a health risk. WNV cannot be transmitted between humans and there is very little chance that the local mosquito population can become infected. The disease has not been detected in mosquitoes, birds, or animals in Washington. The CDC had predicted that WNV could be detected in Washington by this summer or next.



MANAGEMENT. Prevention and habitat reduction are the best methods to avoid WNV.

- **Habitat Reduction** - Proper disposal of tin cans and other water-holding containers, removal of discarded tires, keep rain gutters clean and operable, turn over unused plastic wading pools and wheelbarrows, change birdbath water weekly, eliminate standing water, and drain flooded basements and crawl spaces.
- **Prevention** - Wear protective clothing such as long-sleeved shirts, use effective repellents (contains DEET) when in active mosquito areas, make sure doors and windows are properly screened, stay indoors when mosquitoes are active.

MORE QUESTIONS? Please do not hesitate to give your "Bug Docs" a call at comm.: (360) 315-4450, DSN: 322-4450 or you can e-mail us at ndveccmei@pnw.med.navy.mil.

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